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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,172	08/28/2003	Peter Simonson	D4669-US	5964

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EXAMINER	
PATEL, FAHD	
ART UNIT	**PAPER NUMBER**
2194	

DATE MAILED: 08/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/650,172	SIMONSON ET AL.	
	Examiner	Art Unit	
	Fahd Patel	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 6-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 6-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/13/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-3, 6-28 are presented for examination.

2. **Applicant is reminded that all correspondence must be signed and dated.**

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 6-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Keller et al. (U.S Patent 5,752,032), hereafter Keller.

5. As per claim 1, Keller teaches

at least one physical device (30, Fig. 4);

an adaptation layer, comprising an adaptation layer interface and said at least one device object, said device object comprising at least one capability object and one physical device interface object; said physical device interface object corresponding to and controlling electrical interfaces to said physical device (74, 76, 78, 80, 82, 84, 86, Fig. 2);

at least one software component interface having at least six interfaces communicating with said adaptation layer interface (64, 66, 68, 70-72, Fig. 2);

said at least six interfaces comprising a deployment service interface, a communication service interface, a control service interface, and a component behavior control interface (col. 11, table 2, lines 60-67; col. 12, table 3).

at least one software component, coupled to said software component interface (54, Fig. 2); and

wherein said software component interface controls said physical device through said adaptation layer (col. 9, lines 19-23).

6. As per claim 2, Keller teaches that said physical device is at least one physical device chosen from the group of physical devices consisting of programmable devices, general purpose processors, specialized circuits, and field programmable gate arrays (col. 6, lines 48-63).

7. As per claim 3, Keller teaches that said at least one software component interface is common to software-based frameworks for distributed computing (col. 9, lines 1-13).

8. As per claim 4, Keller teaches that said at least one software component interface comprises at least six service interfaces (col. 11, table 2, lines 60-64).

9. As per claim 5, Keller teaches that said at least one software component interface comprises:

a communication service interface; and

a control service interface (col. 11, table 2, lines 60-67; col. 12, table 3).

10. As per claim 6, Keller teaches

an engineering service interface (col. 11, table 2, lines 60-67; col. 12, table 3);

11. As per claim 7, Keller teaches said adaptation interface providing a single point of interface between said adaption layer and said at least one software component interface (50, Fig. 2)

12. As per claim 8, Keller teaches that said at least one physical device is interfaced to a general-purpose processor (fig. 1).

13. As per claim 9, Keller teaches a processor core deployed on at least one said physical device (col. 6, lines 13-23).

14. As per claim 10, Keller teaches that said physical device interface object controls said physical device independently from a functionality performed by said physical device (col. 30, lines 34-45).

15. As per claim 11, Keller teaches that said capability object controls a functionality performed by said physical device independently from said physical device (col. 9, lines 19-23).

16. As per claim 12, Keller teaches that said physical device is replaceable (col. 6, lines 48-65).

17. As per claim 13, Keller teaches that said physical device interface object is replaceable (col. 9, lines 19-26; col. 22, lines 11-24).

18. As per claim 14, Keller teaches that said capability object is replaceable (col. 9, lines 19-26).

19. As per claim 15, Keller teaches that said capability object provides activities for compliance with a software network, said activities comprising:

deployment;

control;

behavior control;

establishment of connections for communications;

communication and data transfer; and

data sampling and output (col. 9, lines 41-64).

20. As per claim 16, Keller teaches that said capability object comprises

at least one base instance object

at least one communications object, having a communication instance object; and

at least one engineering object, having an engineering instance object (col. 9, lines 35-64).

21. As per claim 17, Keller teaches that said base instance object, said communication instance object, and said engineering instance object are replaceable (col. 9, lines 19-23).

22. As per claim 18, it is rejected for the same reasons as claim 16 above.

23. As per claim 19, it is rejected for the same reasons as claim 2 above.

24. As per claim 20, Keller teaches that said base instance is configured to provide deployment, control, and behavior control activities (col. 9, lines 35-41).

25. As per claim 21, Keller teaches that said communications object is configured to provide establishment of connections for communications and communication and transfer of data activities (74', Fig. 4).

26. As per claim 22, Keller teaches that said engineering object is configured to sample data at a test point and transfer to an application for display and analysis (col. 17, lines 61-67; col. 18, table XI).

27. As per claim 23, Keller teaches that said communication object comprises a communication instance object, said communication instance object is configured to provide deployment, control, and behavior control activities (col. 17, lines 61-67; col. 18, table XI).

28. As per claim 24, Keller teaches that said engineering object comprises an engineering instance object, said engineering instance object is configured to provide deployment, control, and behavior control activities (col. 17, lines 61-67; col. 18, table XI).

29. As per claim 25, Keller teaches a communications instance object, a engineering instance object; said communication instance object, said engineering instance object, and said base instance object each being independently replaceable (col. 9, lines 15-23).

30. As per claim 26, it is rejected for the same reasons as claims 1, 13, 14 above.

31. As per claim 27, it is rejected for the same reasons as claim 2 above.

32. As per claim 28, the examiner invokes OFFICIAL NOTICE that a plurality of software components may be deployed on each said processor. It is elementary that in a multi-processor system, components are executed in a distributed fashion.

Response to Arguments

33. Applicant's arguments filed 6/12/2006 have been fully considered but they are not persuasive. Applicant's arguments are confusing but the Examiner will attempt to answer them all.

34. As per claim 1, on p.11 ¶ 2 of Applicant's remarks, Applicant makes the error of saying that, "the '032 reference discloses a set of interfaces (64-72) from an adaptation layer 50 to users 60." However, the interfaces 64-72 are parts of the software component interface and not of the adaptation layer (see original office action). The further arguments in that paragraph appeared to be based off this misinterpretation.

35. On p. 11, ¶ 3, applicant talks about "interfaces of the physical device", where no such thing is stated in the claim language. It is unclear to what interface recited by the claim this references.

36. On p. 12, ¶ 1, applicant argues that, "[t]he '032 reference thereby implies specific interfaces, not a generalized interface to the device." Examiner finds no place in claim 1 where a generalized interface is claimed.

37. On p. 13, ¶ 2, applicant argues that, "[t]he Office alleges equivalence between the software component of the claimed invention and the kernel layer of the '032 reference. The applicant respectfully submits that this equivalence is erroneous, when the applicant's definition of software component, as articulated in the specification is applied." First, the Office is not alleging equivalence, but is alleging that the two are functionally identical. Second, the Examiner is unaware of an explicit definition in the specification as to the metes and bounds of "software component". Instead, Examiner relies upon knowledge general in the art and points in particular to Computer Dictionary, Microsoft Press, Fifth Edition, 488, where the definition of "software" include "(operating systems), which control the workings of the computer."

38. On p. 14, ¶ 2, Applicant argues that, "[t]hese interfaces are not, as in the claimed invention, interfaces between the software component...and the adaptation layer interface, but instead are interfaces between the adaptation layer and the physical device and are part of the device driver." This is incorrect first because those devices (as shown in the original office action) are part of the *software component interface* and are in fact communicating with the adaptation layer. The adaptation layer appears to function in applicant's invention as a device driver (see Fig. 3, applicant's disclosure). In the '032 reference, they function as just that. "These modules present essentially all the callable entry points that make up the O/S API of the device driver (Keller, col. 7, lines 58-60)

39. As per claim 3, applicant argues (p. 15, ¶3) that the interfaces in the '032 reference, "are insufficient for a framework of distributed computing, such as that of the claimed invention." However, the metes and bounds of a "framework for distributed computing" are. It is clear that the framework, or components are in place for a distributed system.

40. As per claim 6, applicant argues that the cited portion of the reference, "relate not to the software component interface, but to the device driver". However the label to Table two clearly states "General Purpose Operating System API calls supported". The interface is the Application Program Interface, which is related directly to the operating system.

41. As per claims 15-16, 18, 26, Examiner disputes applicant's claims that the cited references are not taught and points to the original office action.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Renda (U.S Patent 5,991,836).
- Parry (U.S Patent 6,845, 508 B2).

- Yang et al., Developing integrated Web and database applications using JAVA applets and JDBC drivers, Technical Symposium on Computer Science Education Pages: 302 - 306 Year of Publication: 1998.
- Bruce, et al., Re-useable hardware/software co-verification of IP blocks:, ASIC/SOC Conference, 2001. Proceedings. 14th Annual IEEE International On, page(s): 413 – 417.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fahd Patel whose telephone number is (571) 272-1044. The examiner can normally be reached on 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thompson can be reached on (571) 272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FHP

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